

In the Claims:

Claims 1-3 (*Cancelled*)

4. (*Previously Presented*) A method of manufacturing a semiconductor device with a substrate and a semiconductor body which comprises at least one active semiconductor element, wherein, after the semiconductor element has been formed, a layered structure is provided comprising at least one electrically insulating layer or one electrically conductive layer, wherein an opening is formed in the layered structure by means of a patterned photoresist layer and an etch process, wherein residues are formed at the surface of the semiconductor body during the etch process, wherein the photoresist layer is ashed, after the etch process, by means of a treatment with an oxygen-containing compound, after which the surface of the semiconductor body is cleaned using a cleaning agent containing a diluted solution of sulphuric acid and phosphoric acid in demineralized water, and being heated to a temperature above room temperature, as a result of which the residues formed are removed from the surface, characterized in that sulphuric acid is chosen for the acid in the cleaning agent, wherein the phosphoric acid concentration is chosen to range between 0.01 and 5% by weight, and preferably between 0.1 and 1% by weight.

5. (*Cancelled*)

6. (*Previously Presented*) A method of manufacturing a semiconductor device with a substrate and a semiconductor body which comprises at least one active semiconductor element, wherein, after the semiconductor element has been formed, a layered structure is provided comprising at least one electrically insulating layer or one electrically conductive layer, wherein an opening is formed in the layered structure by means of a patterned photoresist layer and an etch process, wherein residues are formed at the surface of the semiconductor body during the etch process, wherein the photoresist layer is ashed, after the etch process, by means of a treatment with an oxygen-containing compound, after which the surface of the semiconductor body is cleaned using a cleaning

agent containing a diluted solution of an acid in water and being heated to a temperature above room temperature, as a result of which the residues formed are removed from the surface, characterized in that sulphuric acid is chosen for the acid in the cleaning agent, wherein the temperature is chosen in the range between 20 and 60° C.

Claims 7-15 (*Cancelled*)